REMARKS/ARGUMENTS

Claims 1, 2, 6-8 and 10-16 are currently pending in the above-identified application. Claims 1, 6, 10, and 13 have been amended as set forth in detail below. The following remarks identify support for the amendments. The amendments provide no new matter. Applicants respectfully request reconsideration of the pending claims in light of the above amendments and the remarks below.

Rejections Under 35 U.S.C. §112

Claims 1, 2, and 6-16 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has rejected the claims because of the recitation of the phrase "...a complementary sequence thereof..." Apparently the Examiner does not believe one can discern whether this term comprises any fragment of any size that are complementary to any region in the nucleic acid encoding SEQ ID NO:3. The Examiner has suggested amendment of the claims to recite "...the complementary sequence thereof."

Although Applicants do not agree with the rejection, but to further expedite prosecution of certain subject matter encompassed by the claims, Applicants have amended claims 1, 6, 10 and 13 to recite "the complementary sequence thereof" as suggested by the Examiner. Such amendment obviates the present rejection.

Claims 1, 2, and 6-16 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Examiner believes that the rejected claims contain subject matter which the specification does not describe in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention at the time the application was filed. In particular, the Examiner summarizes the specification as describing a DNA sequence that encodes the polypeptide of SEQ ID NO: 3, which inherently comprises the fully complementary sequence. However, the Examiner does not believe that the specification describes any sequence of any size that

comprise a sequence complementary to the sequence encoding SEQ ID NO:3, because the sequence could range between a few nucleotides that are common to a large number of DNA sequences, to sequences that are larger than the full-length sequence. The Examiner thus has concluded claims 1, 2, and 6-16 as worded would not lead a skilled artisan to conclude that applicants were in possession of all the claimed species and that given this lack of description of representative species encompassed by the genus of the claim.

Applicants do not agree with the rejection as set forth by the Examiner, but in order to further expedite prosecution of certain subject matter encompassed by the claims have amended claims 1, 10, and 13. Claims 1, 6, 10 and 13 have been amended to recite the complementary sequence of an isolated and purified polynucleotide molecule which encodes the murine Dab 1 protein as depicted in SEQ ID NO: 3. As such, the complementary oligonucleotide sequences of those oligonucleotide sequences which encode the amino acid sequence of SEQ ID NO: 3 are inherent and would be recognized as such by the skilled artisan. Therefore, claims 1, 2, and 10-16 are fully described by the specification as filed. Claim 6 has been amended to recite a probe which comprises an oligonucleotide of at least 7 nucleotides derived from the nucleotide sequence as depicted in SEQ ID NO: 2 which specifically hybridizes at 65 - 68 °C in an aqueous solution containing 4-6X SSC with a polynucleotide sequence which encodes a murine Disabled protein 1 as depicted in SEQ ID NO: 3, or the complement thereof. The specification fully describes the amino acid sequence of murine mDab 1 as depicted in SEQ ID NO: 3 and thereby describes all nucleotide sequences that encode the amino acid sequence and their complements. Further, the specification describes a clone (B3, page 27, lines 12 and 13) which was used as a labeled probe (Example IV, beginning at page 31) in Northern analysis of adult mouse tissues and various stages of mouse embryo tissues. Still further, Applicants describe at page 9, lines 16-21 primers and probes that can be derived from a nucleotide sequence disclosed in the application as filed. In addition, Applicants provide at pages 10 and 11 methods and conditions for stringent hybridization of oligonucleotide probe sequences of at least 7 nucleotides derived from SEQ ID NO: 2. Therefore, Applicants have fully described the present invention as set forth in claim 6 and its dependent claims so that one of skill in the art

would recognize that they possessed the full scope of the invention at the time of filing the instant application.

Claims 6-8 stand rejected under 35 U.S.C. §112, first paragraph, allegedly because the claims recite the term "a probe" in claims 6-8 which comprises a oligonucleotide capable of hybridizing at a specific hybridization condition and wash conditions at a temperature of 5-25° C below the T_m...." without specifying the structure of any oligonucleotide sequence. In addition, the Examiner has summarized claim 7 as reciting a probe comprising 15 to 60 nucleotides. Thus, the Examiner concludes that these claims are defined by physicochemical characteristics and are directed to a genus of oligonucleotide probes of any size (given that claim 7 recites a probe *comprising* 15-60 undefined nucleotides). However, the Examiner does not believe that the specification describes the structure of any probe, which is capable of hybridizing to the specific sequence encoding SEQ ID NO:3 at a specific hybridization condition. In addition, the Examiner does not believe that the specification describes the structure of any probe wherein the T_m can be measured in view of determining the wash conditions which require a high temperature of 5 to 25° C below the T_m. The Examiner therefore believes that because of the lack of description encompassed by the genus of the claims, the specification fails to sufficiently describe the claimed invention in such full, clear, concise, and exact terms that a skilled artisan would recognize that applicants were in possession of the claimed invention.

Applicants do not agree with the rejection of the Examiner, but to further expedite prosecution of certain subject matter encompassed by the claims have amended claim 6 to recite, as detailed above, a probe which comprises an oligonucleotide of at least 7 nucleotides derived from the nucleotide sequence as depicted in SEQ ID NO: 2 and which specifically hybridizes at 65-68°C in an aqueous solution containing 4-6X SSC with a polynucleotide sequence which encodes a murine Disabled protein as depicted in SEQ ID NO: 3, or the complement thereof. Further, claim 7 has been amended to recite the probe of claim 6, which is from 15 to 60 nucleotides in length. The probe sequences as recited in claims 6-8 are fully described in the

specification at, for example, pages 9 through 11, and throughout the application as filed. Applicants believe that the as filed specification fully describe and enable claims 6-8 and therefore the Examiner is respectfully requested to reconsider and withdraw this rejection of claims 6-8.

Claims 6-8 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner believes that claims 6-8 contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the Examiner does not believe that claims 6-8 describe the structure of any probe, thus a skilled artisan would not know how to determine the T_m of such a probe which is a requirement for the functional characterization of the claimed probe(s). The Examiner has indicated that the specification teaches on page 10, lines 36-38 and page 11, line 1 and 2, oligonucleotides of 15 or more nucleotides of SEQ ID NO: 2, 4 or 6 and complementary strands thereof capable of hybridizing under stringent conditions to isolated purified polynucleotide molecules encoding mDab1 and that while one can determine the T_m for a probe comprising any oligonucleotide sequence having 15 or more contiguous nucleotides derived from SEQ ID NO:2, 4 or 6.

Applicants do not agree with the rejection of the Examiner, but to further expedite prosecution of certain subject matter encompassed by the claims have amended claim 6 to recite, as detailed above, a probe which comprises an oligonucleotide of at least 7 nucleotides derived from the nucleotide sequence as depicted in SEQ ID NO: 2 and which specifically hybridizes at 65-68°C in an aqueous solution containing 4-6X SSC with a polynucleotide sequence which encodes a murine Disabled protein as depicted in SEQ ID NO: 3, or the complement thereof. The probe sequences as recited in claims 6-8 are fully described and enabled by the specification; see for example, pages 9 through 11 and page 21 of the application as filed. In particular, page 9, lines 17-22 describe oligonucleotide primer and probes of at least 7 nucleotides and up to and including the full coding sequence. The primers and probes are

designed from the oligonucleotide sequences disclosed in the present specification and include the sequence depicted by SEQ ID NO: 2.

In view of the above amendments and remarks Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 6-8 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-467-9600.

Respectfully submitted,

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